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Ritual Practice and Topographic Context. Considerations on the Spatial Forms of Memory in the Central Alps During the Late Bronze Age

Summary

This paper deals with the spatial parameters of two characteristic ritual practices of the Bronze Age in the Central Alps: the deposition of single bronze artifacts, and the activities at *Brandopferplätze* (sites for burnt offerings). I propose two (for some time coexistent) modes for the spatial dimension of cultural memory. While the first one relates to a geographically flexible 'landscape,' essentially defined by the natural environment, the second one features locations of territorial significance. Considering the economic and social change in the Central Alpine region, I consequently postulate a trend towards a detachment of the cultural memory from the unaltered, natural terrain in favour of an increased collective use of ceremonial sites controlled by elites.

Keywords: Late Bronze Age; Swiss Alps; *Brandopferplatz*; ritual landscape; depositionscape; cultural memory; mythical geography.

Der vorliegende Aufsatz behandelt die räumlichen Parameter zweier charakteristischer ritueller Praxen der zentralalpinen Bronzezeit: der Objektdeponierung und der Aktivitäten auf Brandopferplätzen. In Bezug auf die räumliche Dimension des kulturellen Gedächtnisses schlage ich zwei (zeitweise koexistierende) Modi vor. Einer bezieht sich auf eine geografisch flexible ‚Landschaft', in der die exakte Koordinate bei der Platzwahl des Rituals weniger bedeutend ist als die naturräumliche Qualität. Der andere bezieht sich auf territorial bedeutsame Stellen im Gelände. Vor dem Hintergrund der wirtschaftlichen und gesellschaftlichen Veränderungen im zentralen Alpenraum postuliere ich eine Loslösung des kulturellen Gedächtnisses vom natürlichen Gelände zu Gunsten kollektiv genutzter und elitär kontrollierter Zeremonialorte.

Keywords: Spätbronzezeit; Schweizer Alpen; Brandopferplatz; Rituallandschaft; *depositionscape*; kulturelles Gedächtnis; mythische Geographie.

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1 Introduction

Although concepts relating to memory places, memory landscapes etc. are increasingly the subject of discussion in the field of prehistoric archaeology, it must be said that the concepts tend to be applied in an insufficiently nuanced manner. When such concepts are applied to archaeological material, the focus is mainly on burial monuments, whose role is thought to be that of a memorial or a memory place; in some cases burial monuments are even understood collectively as memory landscapes or elements thereof.[1]

This paper aims to take a detailed look at the *topographic context* of two different ritual practices from the Bronze Age and to interpret them in respect of their mnemonic role, drawing on data from the Alpine Rhine valley in the south-eastern part of Switzerland to do so.

The Alpine Rhine valley stretches from the Vorderrhein source northeast of the St. Gotthard Pass right down to Lake Constance and includes the area along the Hinterrhein (Fig. 1).

In addition to the Alpine foothills in the north, which consist of more open terrain, the southern section of the area being studied is characterized mainly by its typical Alpine geomorphology, with mountains as high as 3500 m above sea level and a complex system of valleys with different microclimates. The Central Alps offer several possibilities for crossing between the southern and northern Alpine regions of Europe. There is evidence for transalpine contacts as early as the 2nd millennium BC, and archaeological finds from passes bear witness to the fact that the Alps were occasionally crossed during the Bronze Age.[2] Although the Central Alps were visited and even exploited economically before the Bronze Age, and some temporary camp sites and longer-term settlements are known from the Mesolithic and Neolithic periods, it is only from the Middle Bronze Age from the 2nd half of the 2nd millennium BC on that there is clear evidence, that

1 E.g. Bourgeois 2013, 16, 201–202.

2 Transalpine contacts: Primas 1977; Fischer 2003, 114–115; see also Pauli 1992. – Pass finds: Wyss 1971, 130.

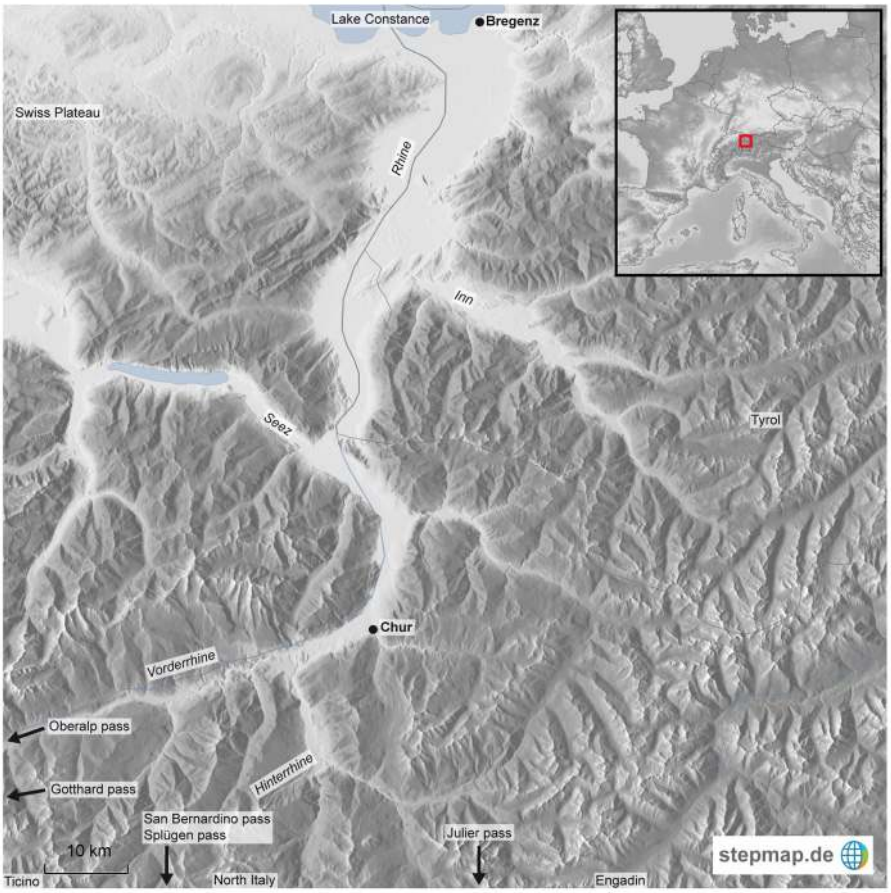

Fig. 1 Topographic model of the Alpine Rhine valley.

human populations laid more permanent claim on the area.[3] The Bronze Age 'colonization' process opened up new living space and additional lands: permanent settlements and cultivation developed up to an altitude of 1500 m, and forestry and pastoral farming was practiced even in regions of the High Alps of elevations above 2000 m. Moreover, traces of Bronze Age ritual activities have also been found in the Central Alps. Two of these practices, i.e. the deliberate depositing of bronze artifacts and collective ceremonial performances on *Brandopferplätze* will be discussed in the following.

Certain difficulties with regard to reliability are associated with the two source categories central to this paper – artifact depositions on the one hand and *Brandopferplätze*

3 Primas 1998; Della Casa 2000, 84–87; Rageth 2010.

on the other – particularly in connection with to the state of research, the quality of information, and the lack of archaeological contexts. The lack of written sources for the period of interest, as well as the limited knowledge about aspects concerning the social organization, the ideology and the mythology etc. of the populations at issue complicate the task of providing differentiated discussion of topics such as cultural memory or mental landscapes even further. Nevertheless, the evident relationship between the source categories under discussion here and their specific topographic context does make it possible to formulate a number of important and comprehensible observations.

2 Deposition topography

The archaeological source category known as 'depositions' relates to objects intentionally placed on the ground, buried in the soil, put into rock crevices or sunk in rivers, lakes or swamps. Depositions are sometimes found in the context of settlements and burials, but many are found in isolation, e.g. in natural, unaltered environments that feature no other man-made structures. These objects deposited typically take the form of a single or several bronze artifacts – costume elements, weapons, instruments and/or tools – though raw materials in the form of ingots can also be deposited. Depositions are considered characteristic for the European Bronze Age between around 2200 and 800 BC; they occur in significant numbers all over Europe throughout the Bronze Age. There has been controversial debate about the function of object depositions among archaeologists for decades, with interpretations ranging from temporary deposits (which were never retrieved) or material storage (so-called foundry or trader hoards) to loss, right through to sacrificial offerings and votive gifts. The fact that Bronze Age object depositions are often found in the absence of any additional archaeological context makes their interpretation even more difficult in most cases. An attempt to arrive at a single, standard explanation for all depositions would hardly be appropriate, since it must be assumed that that the intentions and motives behind their establishment varied. Nevertheless, researchers have stressed on multiple occasions that, from a methodological point of view, a holistic treatment and assessment can definitely be useful for a general understanding of the phenomenon, or may even be imperative.[4]

Last but not least, the object depositions show certain regularities in terms of the choice of artifact categories, or the depositions' locations. These suggest that there was more to their creation than random, simple and individually motivated acts (such as would be the case with hiding places, for instance). In this regard, Svend Hansen identifies a social "consensus" underlying the depositing of objects, which he subsequently

4 Von Brunn 1968, 230, 263; Hansen 1991, 179–181; Hansen 2002, 95.

qualifies as a *social practice*.[5] If one accepts the notion that depositions are a consequence of a social practice as defined by Pierre Bourdieu, then they provide important indications of the predominant collective social dispositions (in the sense of a *habitus*), as well as of the social structure in general.[6] Not only the actual execution of the act, but above all the material involved in each specific case, i.e. the bronze artifacts, and, as will be argued later, the related topography as well, point to the performatory aspect of the acts of depositing.[7] The obvious staging of the depositional acts by means of a specific spatial setting, for example, and in addition their spatial differentiation from the daily life indicates their ritual character.[8]

The focus below is on what are called 'single finds' which are understood to represent intentional depositions of one single item.[9] When finds occur in isolation, without an archaeological context, one naturally has to ask oneself whether they really are deliberately deposited objects rather than artifacts that someone lost, or which were at some point displaced from settlement or burial sites. When it is not an ensemble of finds comprising multiple artifacts, but individual bronze artifacts in isolation, located at great remove from other archaeological structures, the question becomes even more acute. Though, as has already been stated above, differing reasons and motivations may have played a part in the origins of single finds,[10] a holistic consideration of the source category is nevertheless required methodologically, if one is to arrive at an interpretation of the phenomenon.[11] As I will show, the temporal, spatial and formal criteria of these single finds do exhibit regularities.

A large number of single finds from the Bronze Age have been discovered in the Alpine Rhine valley (Fig. 2), including 163 objects that can be geo-referenced (i.e. for which a topographic context is known).[12] These latter objects consist mainly of dress

5 Hansen 2005b, 297; see also Hansen 2005a; Fontijn 2002, 275–277; Vandkilde 1998.

6 Bourdieu 1972; see also von Ballmer 2010, 121–124.

7 Ballmer 2010, 125.

8 Bell 1992, 90–91.

9 Definition and terminology: Bergmann 1970, 13; Horst 1977, 168.

10 Cf. Neubauer and Stöllner 1994, 101.

11 Von Brunn 1968, 230, 263; Hansen 1991, 179–181; Hansen 2002, 95.

12 The context of many single finds is not known because in many cases they were not discovered by professionals. Furthermore, the possibility of (mainly naturally caused) displacement processes must be kept in mind. Single finds without other accompanying anthropogenic structures, in particular, raise the question of whether the archaeological site of the discovery coincides with the original deposition location. However, a critical analysis with the source category of the single finds as an overall phenomenon requires the provisional *a priori* assumption (in the sense of a momentary working hypothesis) that the single finds were left at the site of their discovery or in the close vicinity thereof (and that their location was not the result of displacement from other contexts in the course of time). Moreover, the corresponding geo-factors must be assessed with a certain flexibility when analysing the finds' topography: an axe blade from the close vicinity of a water spring could certainly have a topographic connection to that spring, even if it was not left/found in the spring itself. In the end, what is important here are the topographical *trends* and *tendencies*, which, of course, must be assessed in a critical appraisal of the source and interpreted accordingly.

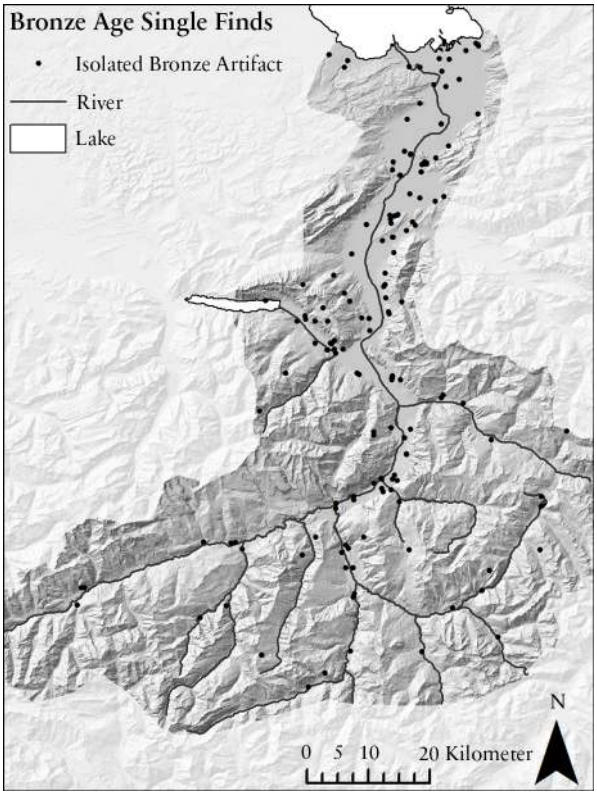

Fig. 2 Distribution map of the Bronze Age single finds within the study area.

pins (n = 38; 23.3 %), axes (n = 38; 23.3 %), daggers (n = 23; 14.1 %), spears (n = 18; 11.0 %), swords (n = 16; 9.8 %) and knives (n = 15; 9.2 %). The pins originate mainly from the flood plain of the section of the Rhine between the Inner Alps and Lake Constance, and not from the inner alpine area. Further types of artifacts (n = 15; 9.2 %), e.g. other costume elements, tools, such as sickles or chisels, and also raw materials in the form of ingots, are clearly underrepresented and form an exception in the range of Central Alpine Bronze Age single finds. In the area being studied, the phenomenon of single finds manifests itself with a clear five-fold increase in the relevant evidence starting in the Middle Bronze Age, with the numerical peak clearly coming in the Late Bronze Age.

The single finds discussed here are distinctive by virtue of their find situations in high altitudes, making them part of the Alpine phenomenon of what are called 'high-altitude finds' *(Höhenfunde)*.[13] The selection of artifact categories represented by the

13 Wyss 1971; Wyss 1996; Neubauer and Stöllner 1994.

high-altitude finds in the Central Alps, which appears structured and hence deliberate, and their correspondence with those represented by contemporaneous river finds prompted Wolfgang Neubauer and Thomas Stöllner to connect the isolated bronze artifacts with intentional depositions.[14] The two authors have also been able to identify what appears to be a specific treatment of the end-winged axes in the eastern Alpine/northern Italian traditional form[15] of the phases Hallstatt B3 and Hallstatt C (i.e. the transition from the Late Bronze Age to the Early Iron Age around 800 BC). In the Southern and Eastern Alps, as well as in Northern Italy, axes of this shape can be found predominantly in multi-piece depositions and burial contexts. During the same period, the same axe type is absent in burials in the Central Alpine region between the Grisons, Trentino and Southern Tyrol, but instead occurs in increased numbers in the form of single finds.[16]

A further starting point for arriving at an understanding of depositions is their spatial setting. Early discussions already pointed to a possible relationship between deposition sites and distinctive characteristics of the natural topography. Many bronze artifacts seem to have been discovered in the context of mountain tops, hill spurs, rock faces and gorges, others in watery places such as springs, rivers and confluences, lakes, swamps, etc.[17] Topographically distinctive situations, in particular, are deemed to have a special significance in respect of the presence of bronze artifacts, which is why they are sometimes referred to as "natural sanctuaries".[18] Based on his research on Bronze Age depositions in the southern Netherlands, David Fontijn has proposed the concept of a 'sacrificial landscape' as an alternative to Richard Bradley's idea of "sacred (natural) places".[19] Such landscapes would lack actual sanctuaries or defined places of cult worship (as presented by R. Bradley). Instead, the sacrificial landscape would be characterized by a collective understanding of the (imaginary) landscape, in which places and zones would be associated with different meanings and, accordingly, be treated differently.[20]

A recent study on the topography of Bronze Age single finds in the Alpine Rhine valley has indeed brought to light corresponding regularities.[21] The repeated deposit of material at one site over a certain period during the Bronze Age is not known for this region. It turns out that the topographic pattern of the depositions of single artifacts

14 Neubauer and Stöllner 1994, 116–118; Wyss 1971, 132.

15 Hallstatt type and Hallein type acc. to Mayer 1977, 167–180; Group VIII acc. to Lunz 1974, 39–40.

16 Neubauer and Stöllner 1994, 116; see also Stöllner 2002, 574. – From the Grisons, the axe from Davos Drusatschaalp can be listed as an example of this: Hauri 1891; Zürcher 1982, 24 no. 43.

17 Menke 1982, 49–78; Kubach 1985; Winghart 1986; Schauer 1996; Wyss 1996.

18 Schauer 1996, 381; see also Torbrügge 1993, 568, and others.

19 Bradley 2000.

20 Fontijn 2002, 259–272.

21 Ballmer 2015.

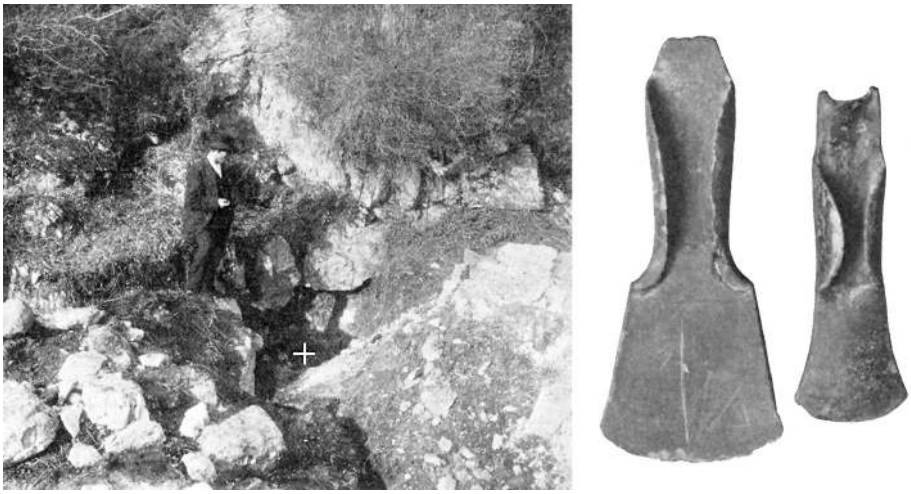

Fig. 3 Two Late Bronze Age axe blades and their particular finding spot at a source above the village of Rueun (canton of Grisons, Switzerland), as seen at the time of the discovery at the beginning of the 19th century.

manifests itself less in spatial concentrations or clusters,[22] but rather in a statistical frequency of the *topographical features and qualities*, when one looks at the finds in general.[23] These features and qualities include riverine alluvial plains, passes, springs, special sections of routes, such as junctions, or the entrances to gorges (Fig. 3). This means that topographical conditions and characteristics rank above geographical coordinates in the hierarchy, i.e. that topography-related social activities in the area being studied hinged more on overall qualities of the natural environment and less on fixed locations.

In the area of interest, man-made markings that are visible on the surface and indicate the locations at which material was deposited are not known. Although one could point to preservation conditions as an explanation for this observation, most of the locations in question reveal traces of only one depositional act, a circumstance which supports the thesis that the sites were visited only once and suggests that a repeated visit to the site may never have been intended, and that there may have been no need for a visible marking of the spot. Therefore, the sites of depositions can hardly be said to have fulfilled the function of a memory or memorial site *sensu stricto*. Unlike burial monuments, for example, which served as a prominent reminder of a (deceased) person or even a generation, and at the same time implicated moments from the cultural memory, it would appear that there was no necessity for deposition locations to be recognized by others after their use. Instead, they apparently served to remind the person(s) performing the

22 See also Fontijn 2012, 63.

23 The relation to these topographical qualities becomes apparent primarily when the total number of single finds are taken into consideration.

depositional act of elements from the cultural memory *at the moment of the deposition itself*. These deposition sites are thus not memory places in the narrower sense of that term.[24] Despite the deliberate selection of the topographic setting of the depositions, an actual *localization,* such as one might have envisage had there been evidence of repeated depositional acts performed at one and the same place, is lacking.[25] And importantly, the deposition sites lack a key characteristic of memory places: their "invisibility",[26] owing to the lack of any anthropogenic marking of the site, means that the site does not exhort anyone to remember something after the depositional act has taken place.

The comparison with a commemorative landscape, as defined by Maurice Halbwachs, does not seem promising either. In his pioneering work "La topographie légendaire des évangiles en Terre sainte" from 1941, the French sociologist discusses the Christian topography and its creation: the fictive map of the Old Testament was transferred onto the real topography of Palestine with the intention of creating a real setting for biblical events. In consequence, the logic of this topography works not with respect to individual sites or monuments, but crucially over a relational network of several reference points.[27] The Egyptologist Jan Assmann stresses that under the principle of the commemorative landscape the emphasis is not so much on the individual memorials, but more on the landscape, which "as a whole is elevated to the rank of a sign, i.e. rendered semiotic."[28] The Bronze Age deposition topography, which features distinct natural-environmental qualities, does indeed seem to relate to something like the overall landscape rather than defining itself via individual places. The principle of an underlying network, as described in M. Halbwachs' 'topographie légendaire', cannot really be transferred to the present facts in this case, however. The lack of sites used repeatedly to deposit bronze artifacts, i.e. actual reference points, or to put it differently, the continual abandonment of deposition sites or the continual addition of new deposition sites, leads to an absence of the above-mentioned necessary relational reference system in the sense of an actual map.

Apparently, therefore, the practice of deposition does not reproduce a 'landscape' in the sense of a network of localities resulting in a plane with defined boundaries, as would be the case with an administrative or political territory, for instance.

24 In an earlier paper (Ballmer 2016), I compared the deposition sites with Pierre Nora's *lieux de mémoire* (Nora 1984). To a certain degree, this reference may apply to places which experience depositions repeatedly, but – after thorough consideration, and in respect of the present case – by no means does is apply to the large number of sites which were typically visited only once for the deposition.

25 As noted above, cases of repeated depositional activities at one and the same location are lacking in the area being studied. In cases where artifacts were repeatedly deposited at the same location over a certain period, man-made visible markings could have existed and, of course, collective knowledge about this site must have existed.

26 Cf. Fontijn 2007.

27 Halbwachs 1941; Assmann 2007, 40, 60; Dünne 2011, 97.

28 Assmann 2007, 60.

This therefore raises the question as to the character of the space to which the depositions of bronze artifacts discussed here relate. The understanding of landscape provided by the ethnologist Arjun Appadurai might provide a promising approach here. Starting from today's globalized conditions, A. Appadurai uses the suffix "–scape" to designate landscapes which are *not* defined via places or territories, but form a de- or trans-territorial unit with flexible contours which is defined first and foremost by the individual representatives of a specific community. It is particularly important to note that these representatives can indeed be mobile and separate in space. Through their joint identity a kind of 'imagined world' is formed, which, in terms of absolute geography, is neither bounded nor interconnected – i.e. a *scape*.[29] A. Appadurai defines, for example, the concept of the "ethnoscape", a space of a specific ethnic group, whose representatives, though scattered across the globe, nevertheless share a common ethnic identity, or elements thereof, and thus form a meta-geographical landscape.[30]

The connection to the Bronze Age deposition topography lies in the geographic flexibility of the Appaduraian *scape*: a *scape* does not depend on geo-referenced points, but is instead characterized by relatively flexible points within a space. Thus the single artifacts deposited form a kind of 'depositionscape'. This refers not to the territory of a community with absolute reference points located therein, but initially to the natural environment as such. The 'depositionscape', as a concept, is in this case held together by a collective idea of the natural environment in which qualitative topographical units form the crucial determinants regardless of their absolute location.

How can this 'collective idea' be described more specifically? I would like to propose taking the mythical geography as the decisive parameter, i.e. the different settings in the prevailing mythology with locations in the Underworld or the realm of the Gods. Similar to the case of M. Halbwachs' "topographie légendaire" (cf. *supra*), this mythological topography is conceptually transferred to the physical topography – although in the Bronze Age context this transfer takes place in a quite different way: not only is the mythical topography projected onto a terrain that is left more or less in its natural state, but this projection of the mythical map is not geo-referenced in absolute terms. Instead, it is more a kind of flexible projection, in which settings and spheres from the mythology are associated with specific features and qualities of the natural environment. Kristian Kristiansen and Thomas B. Larsson quite rightly describe the connection between the unaltered, natural landscape and the cosmological order as a "major characteristic of Bronze Age religion."[31] Though it is true that details of the Bronze Age cosmology remain unknown, a number of indications can be used to compile a sketch of the idea of

29 Appadurai 1990, 296–297, 301.
30 Appadurai 1990, 297.
31 Kristiansen and Larsson 2005, 354–356.

the world held by the people at that time. Using the Nebra sky disk as his basis, Harald Meller points out that, towards the end of the Early Bronze Age, the world image may have already corresponded to a three-dimensional model in which a celestial dome vaults over the flat disk of the Earth.[32] This idea is represented in a very abstract form in the wheel cross symbol often used in the Bronze Age. As a cross-sectional view of the world, the horizontal line represents the flat Earth, while the upper semicircle depicts the daily course of the Sun and the bottom semicircle corresponds to its nightly course. The perpendicular line can be interpreted as a kind of central *axis mundi*, conceptually linking the different levels with one another.[33] This interpretation of the wheel cross symbol is based on the recurrent elements of the Bronze Age mythology and the associated iconography in particular. In this iconography, a vehicle (a wagon, a ship or sometimes also an animal) carries the Sun through the Upper-, Middle- and Underworld.[34] This iconography, which is known particularly from the Nordic regions,[35] finds only implicit analogies in the Alpine region. The iconographic program of the so-called 'bird-sun-bark' *(Vogelsonnenbarke)*, which turns up during the Late Bronze Age in and around the Alpine region also refers to the myth of the eternal journey of the Sun.[36]

The (sparse) sources on this topic indicate that the idea of the surrounding physical world corresponds in its fundamental concept with the map of the mythical cosmos. The notion of a 1:1 projection of the vertical cosmological model onto the real-life horizontal terrain for the Bronze Age situation can be ruled out nearly completely. Taking up the observations stated above, I believe it is more likely that specific features and qualities of the unaltered, natural environment were understood and used as 'contact points' of one kind or another, points at which the everyday world and the mythical cosmos 'met'. For example, as can be inferred from the Bronze Age world image, water connects the different levels of the mythical cosmos (such as the Under-, Middle-, and Upperworld).[37] Via the medium of the natural environment, not only does the mythical cosmos as such become 'real' during the ritual, but the supernatural realms also become physically accessible, and thus the performed ritual becomes effective.[38] In 1909, Arnold van Gennep was the first to point out the role of topographic transition zones within "rites de passage".[39] Consequently, transitional situations of the natural landscape, as spatial and magically important intersections between two topographic areas or imaginary worlds, form suitable, effective frameworks and stages for the passage rites carried out there.

32 Meller 2010, 64.
33 Kaul 2005, 145–146.
34 Kaul 2003; Kaul 2005, 138; Kristiansen and Larsson 2005, 294–296.
35 For example Kaul 2004; Kristiansen and Larsson 2005, 294–316; Kristiansen 2010.
36 Kaul 2003; Kaul 2004; Wirth 2006.
37 See also Torbrügge 1970–1971; Torbrügge 1993.
38 Bradley 2000, 28–32; cf. Bell 1997, 157.
39 Van Gennep 1909, 19–27, 275–276.

In the Bronze Age, waters constitute only one topographic quality from among a whole series of preferred deposition milieux. Mountain passes and gorges also appear to have been favored places for object depositions. These environmental features and qualities have a *liminal moment* in common, in both a physical topographic as well as in a symbolic sense. On the one hand, they are transition/boundary situations in the natural landscape; on the other hand, they are ambiguous by virtue of being perceived simultaneously both as a practically or even economically important environment, and as a risky one. This practical and symbolic ambivalence of a topographic quality definitely lends itself to be understood as a conceptual interface to another (imaginary) world.[40]

In summary, the discussion above leads to the following finding about the topographic memory culture: depositional practice, as ceremonial rituals, relate to a *scape*-like space concept. The common topographic parameter of the depositional practice, which defines the *scape,* consists of the mythical geography and, in particular, the localities of contact with the mythical cosmos in general, as well as those with the otherworldly, supernatural realms in particular. The cultural memory (i.e. the mythology) is thus not tied to precise coordinates, but seems to be 'shifting' between specific natural environmental milieux.

Depositions, as a specific kind of topographically relevant performance reduces significantly in scale in the Iron Age,[41] thus in numerical terms the Alpine high-altitude finds from the Iron Age correspond to approx. a quarter of those for the Bronze Age.[42]

3 *Brandopferplätze* as topographic reference points

Brandopferplätze (literally: sites for burnt offerings) can be found from the end of the Middle Bronze Age, and especially from the Late Bronze Age. They represent a typical Alpine phenomenon.[43] These sites are defined by a number of different characteristics, the most important ones being an exposed or otherwise distinctive topographical situation, the presence of significant quantities of burnt animal bones, and often massive layers of charcoal, as well as special incineration places (Fig. 4).[44] The main activities deduced from the archaeological record involve primarily bloody animal sacrifices and plant-based food, which were apparently burnt both during and after the ceremonies. In addition, there are indications of collective consumption, or 'cult meals.'[45] The offering of bronze artifacts plays only a relatively minor role on the Bronze Age *Brandopferplätze*,

40 Bradley 2000, 27; Fontijn 2002, 266–267; Kristiansen and Larsson 2005, 355–356; Brück 2011, 390.

41 The deliberate deposition of weapons (notably swords) in rivers during the later Iron Age, i.e. the Latène period, seems to follow a different logic and should be understood as a separate phenomenon.

42 Stöllner 2002, 572–573; cf. Egg 2002, 974.

43 Steiner 2010, 642.

44 Krämer 1966; Weiss 1997; Steiner 2010, 341–342.

45 Steiner 2010, 504–514.

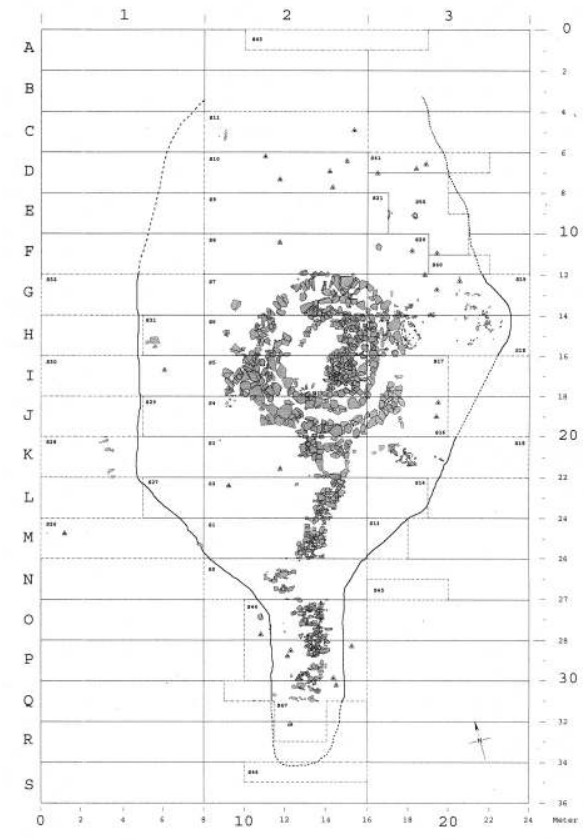

Fig. 4 The *Brandopferplatz* of Feldkirch Altenstadt Grütze (Vorarlberg, Austria) in the archaeological record: plan showing the stone structures (shaded in gray) as well as horizontal extension of an ash layer (indicated by the black line) containing an impressive amount of ceramic shards and animal bones. The site was established and frequented in two main phases around the 11th century BC.

however.[46] The question of whether Bronze Age *Brandopferplätze* can qualify theoretically as sanctuaries in the theological sense[47] is not the subject of this paper. This matter was last discussed in detail by Hubert Steiner.[48] Their designation as 'ritual sites' is based on the apparent continuity of use: it is obvious that practices were carried out at these places repeatedly. The said practices are furthermore lifted out of or distinguished from daily life by means of their intentional staging. The religious studies scholar Catherine Bell identifies this strategy as the "ritualization" of social practices, which results in the practices appearing to be more important, more legitimate, more powerful and more effective.[49]

46 Steiner 2010, 342, 630–634, 642.

47 E.g. Colpe 1970.

48 Steiner 2010, 340–342.

49 Bell 1992, 74, 90. – *Brandopferplätze* are not spatially remote from the settlements in every case, but can also border them or in some cases even be integrated into them, Steiner 2010, 341, 476–499.

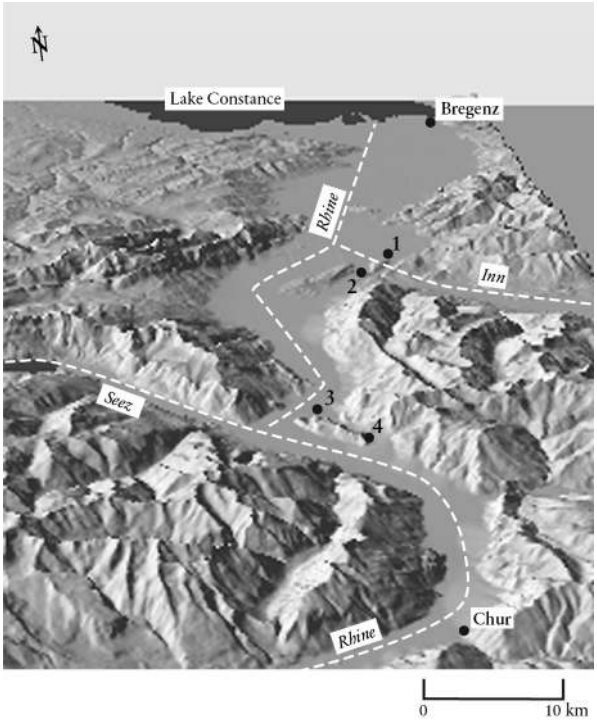

Fig. 5 Topographic model showing the situation of the mentioned *Brandopferplätze*. 1: Feldkirch Blasenberg Göggelwald; 2: Feldkirch Altenstadt Grütze; 3: Balzers Gutenberg Glinzgelibüchel; 4: Fläsch Luzisteig Prasax.

In the area being studied, the archaeological record of the sites at Feldkirch Blasenberg Göggelwald[50], Feldkirch Altenstadt Grütze[51] (both in Vorarlberg, Austria), Balzers Gutenberg Glinzgelibüchel[52] (Principality of Liechtenstein) and Fläsch Luzisteig Prasax[53] (canton of Grisons, Switzerland) provides indications of their use as *Brandopferplätze* during the Late Bronze Age (Fig. 5).

H. Steiner makes a general statement that exposed situations located on the edge of a valley between two sections of a landscape are favored sites for the set up of *Brandopferplätze*, and he therefore assesses them as "important structural elements of a cultural landscape."[54] This topographic characteristic also definitely applies in the area being studied: while the two Vorarlberg *Brandopferplätze* from the sites of Feldkirch Blasenberg Göggelwald and Feldkirch Altenstadt Grütze are associated with the junction of the Rhine valley and the Ill valley, that of Balzers Gutenberg Glinzgelibüchel is situated at the 'gateway' to the Inner Alps. Moreover, the Late Bronze Age settlement of

50 Heeb 2012, 371, no. 298.
51 Vonbank 1955, 122–123; Vonbank 1963; Weiss 1997, 169, no. 33; Leitner 2002; Heeb 2006.
52 Gleischer, Nothdurfter, and Schubert 2002, 225, no. 30.
53 Jahrb. SGUF 86, 2003, 220–221; Berger 2009.
54 Steiner 2010, 485, 492–493.

Wartau Gretschins Herrenfeld[55] (canton of St. Gallen) is situated within sight on the opposite bank of the Rhine and therefore might also belong to the territory associated with this *Brandopferplatz*. The *Brandopferplatz* of Balzers Gutenberg Glinzgelibüchel definitely also relates to the stretch between the Alvier massif in the west and the Fläscherberg or Rätikon in the east where the Rhine valley narrows – i.e. the transition to the Inner Alps, and the access to the St. Luzisteig pass. It marks the southern end of the valley section, or the limit between the section around Balzers and the region bordering to the south. Together with the Late Bronze Age *Brandopferplatz* of Fläsch Luzisteig Prasax, situated at the southern end of the Fläscherberg, it could also mark the geographically important transit route section between the Rhine valley south of Lake Constance and the Inner Alps.

Against the background of similar observations in the contiguous regions, it can be assumed that the *Brandopferplätze* serve, among other things, as territorial reference points. Not only do they relate to topographically important intersections, they also often appear to relate to a regional catchment area that includes several settlements.[56] This is one reason why an interpretation of them as gathering centers for several settlement communities seems plausible.

When one attempts to apply the notion of a topographic memory culture here, a completely different picture emerges than that presented by the artifact depositions. In the case of the *Brandopferplätze,* although the practices, carried out repeatedly and over a longer period, are properly localized and although the site selected to establish the place must be seen as having a close relationship with the topography, the coordinates where the practices are carried out are specified by a definite site, which can be recognized as such and does not have to be determined, recognized and identified by the actors themselves.[57] Indeed, it is likely that the status of the ceremonial place and also that of the performances carried out there benefit from the topographically outstanding situation. As has been noted above, a transitional topography might contribute to the effectiveness of a ritual.[58] At the same time, from a spatial point of view, the performed activities relate primarily to the site itself and not to the whole topography, the territory or the natural environment. The topographic relation between the practices and the *Brandopferplätze* thus always is somehow indirect – in any case much less direct than that of the depositional practice.

55 Jahrb. SGU 44, 1954/55, 73–74; Primas et al. 2004, 20–26.

56 Steiner 2010, 642.

57 The site selection for the establishment of a *Brandopferplatz*, any other social gathering place or protosanctuary is nevertheless based on a collective decision of the group(s) concerned. The places where the *Brandopferplätze* were set up were also probably selected on the basis of their already implied symbolic meaning (which is mainly comprehensible for the exposed, topographically prominent sites).

58 Van Gennep 1909, 24, 27; cf. Bell 1997, 157.

The establishment and use of the *Brandopferplätze* as a typically Alpine form of ceremonial site will continue into the Roman imperial period.[59] In the area being studied, actual sanctuaries taking the form of architectural structures can be found only with the nascent Roman influence.[60]

4 Object depositions and *Brandopferplätze* and their mnemonic potential

"The most original medium of mnemonics is spatialization",[61] writes J. Assmann. Since it has been shown that the deposition of Bronze artifacts as well as the activities on the *Brandopferplätze* can be understood as ritualized practices with clear topographic references, the question of their mnemonic potential now arises. The ritual deposition of artifacts and the various ceremonial activities on the *Brandopferplätze* reproduce the cultural memory[62] (or components thereof), making them part of the active memory process.[63]

As has been shown, the two source categories are characterized by distinctive, albeit completely differing, topographical contexts. This observation initially leads to the conclusion that they refer to different spatial concepts. While in the case of the depositions, we are confronted with a reproduction of the mythological cosmos in the form of a 'scape', it is likely that *Brandopferplätze* reflect mainly actual territorial relationships. In the chronological comparison, the practice of object deposition in the Central Alps declines drastically around the beginning of the Iron Age, while the custom of executing collective ceremonial rituals, including the burning of offerings, on specially defined sites increases noticeably from the end of the Bronze Age and establishes itself as a prevalent practice in the following period. Although the two ritual practices were carried out in parallel and appear to have complemented each other without being directly connected to one another, the observations about their topography might point to a shifting in the understanding of the natural environment from a memory*scape* to an actual memory*landscape*.

Against the background of the discussion above, it is certainly interesting to mention the Late Bronze Age trend towards a structural differentiation and centralization in the settlement landscape: from around the 11th century BC onwards (i.e. in the Late Bronze Age, respectively in the phase Hallstatt B), so-called 'clustered settlements'[64] start

59 Steiner 2010, 647–656.

60 The Jupiter temple from the Julierpass in the canton of Grisons can be listed as an example for this, Koenig 1979.

61 Assmann 2007, 59.

62 Assmann 2007, 56–59.

63 C. Bell points out that these processes can definitely proceed instinctively, Bell 1997, 78–83, 167.

64 Primas 2008, 41.

to occur in the Grisons area, as well as in the Rhine valley south of Lake Constance. These are characterized by their size, their convenient location in terms of traffic routes, and their elaborate fortification works.[65] The trend towards settlement agglomeration essentially continues in the Iron Age and attains a special importance then.[66]

Also worthy of consideration are the actors behind the practices discussed here. Single artifact depositions are associated mainly with individual persons (possibly along with associated persons).[67] In the relevant literature, hunters, herders, ore prospectors, and possibly traders or sumpter-like operators, as well as travelers, are assumed, on the basis of the topographical find context and the range of artifact categories, to be the persons responsible for the Alpine high-altitude finds.[68] In contrast, the preserved remains on the *Brandopferplätze* appear to testify to larger-scale ceremonies involving numerous participants ('ritual communities') – whose numbers one can easily imagine to have included the individuals behind the single object depositions as well – and specifically involved the presence of a corresponding ruling 'establishment' as well.[69] With the increase in the demand for raw materials and resources, the formation of social elites, and the associated increase in organizational complexity[70] from the second half of the Bronze Age onwards, it seems reasonable to expect not only an institutionalization of the power relationships and the spatial circumstances, but also an increasing institutionalization of the collective memory. Although ritual practices carried out by individuals in the unaltered natural landscape still occur towards the end of the Late Bronze Age and in the Early Iron Age (and far beyond as well), the natural topography no longer appears to form an equally important determinant here (at any rate, traces suggesting such a role are rarely to be found today)[71].

With regard to the form of memory, communicative memory plays a far greater role in the selection of the deposition sites than it does in the frequenting of a *Brandopferplatz*: if one accepts that individual (albeit socially structured) initiatives are behind the single

65 E.g. Montlingerberg (Primas 1977; Steinhauser-Zimmermann 1989, 69–70, 73); Flums Gräpplang (Neubauer 1994); Berschis St. Georg (Jahrb. SGU 25, 1933, 89; von Uslar 1991, 112 no. 1U3; Fischer 2003, 112). – All sites are situated in the canton of St. Gallen, Switzerland.

66 Extremely rich and proto-urban settlements in the style of so-called 'princely residences' do not materialize in the Central Alps, however, cf. Pauli 1992, 613–614.

67 For example Kossack 2002, 313.

68 For example Wyss 1971, 138; Wyss 1978, 142–144; Mayer 1980, 181; Neubauer 1994, 118.

69 Steiner 2010, 504–514, 598–599.

70 For example Clausing 1998, 318–319; Kristiansen and Larsson 2005, 218, 224; Primas 2008, 197–201; Steiner 2010, 611–615. No such noticeable trend towards social structuring of the kind that existed in this period in the areas directly to the north and south can be detected, Steiner 2010, 608. Here, the structuring becomes manifest through settlement archaeology, with researchers making inferences about social hierarchies on the basis of spatial and functional hierarchies, cf. Primas 2008, 39–46.

71 Th. Stöllner rightly points out that, theoretically, one must always expect that organic materials may have also been deliberately deposited, Stöllner 2002, 582. These have not been preserved however.

object depositions, the active tradition of the custom of depositing artifacts, and particularly of the relevant topography, must have been an essential part of the "communicative memory" culture[72] (whereas cosmology, as the determining structure, always remains the content of *cultural memory*!). The deposition of artifacts at unaltered, natural locations requires a form of knowledge which was obviously widely known and accessible to practically everyone. The awareness of the mythical geography can be seen as part of Bronze Age socialization or *habitus*. At this moment of shared knowledge about the natural environment, it was obviously possible for anyone to make contact with the different realms of the mythical cosmos. This points to an individual rite with an 'equal right' of access for all. With the institutionalization and specialization of the ritual practices and the corresponding locations, cultural memory gains significantly in importance, which is not least expressed in a distinct participation structure: J. Assmann writes that "everyone is equally competent",[73] with respect to communicative memory, while in the cultural memory culture knowledge is tied to specialists who possess it, because "cultural memory, unlike communicative, is a matter of institutionalized mnemonics".[74] Participants of a collective ritual ceremony do not necessarily require either mythical, or real geographic knowledge, as they follow an authorized master of ceremonies within a controlled context. For the spatial memory of a society, this means a shift toward a physically and mentally organized, institutionalized and hierarchized landscape and away from a natural and cultural space with a more egalitarian concept: a space in which cultural memory did not depend on a territory and could be called up by practically every appropriately socialized person (Fig. 6).

These two different modes of topographic memory obviously co-existed for some time,[75] and since the concepts associated with them do not necessarily compete with one another, they would not have interfered with each other. Why the individual rituals with topographic context ultimately cease to be an archaeologically detectable phenomenon is difficult to explain. Based on the current state of research, it may be possible that a change in religious thinking is involved: either the mythological geography no longer has such a strong connection to the physical terrain, or the mythological realm can no longer be reached by individuals with the aid of the physical natural environment. The increased occurrence of *Brandopferplätze* towards the end of the Bronze Age coincides with a simultaneous increase in density and hierarchization of the settlement network, accompanied by a more pronounced social structure and the extension of the

72 Assmann 2007, 48–56.
73 Assmann 2007, 53.
74 Assmann 2007, 52.
75 The almost regularly occurring multi-artifact and single depositions in the immediate vicinity of *Brandopferplätze* constitute a special phenomenon not discussed here. For details see: Steiner 2010, 523–535, in particular 523, 526.

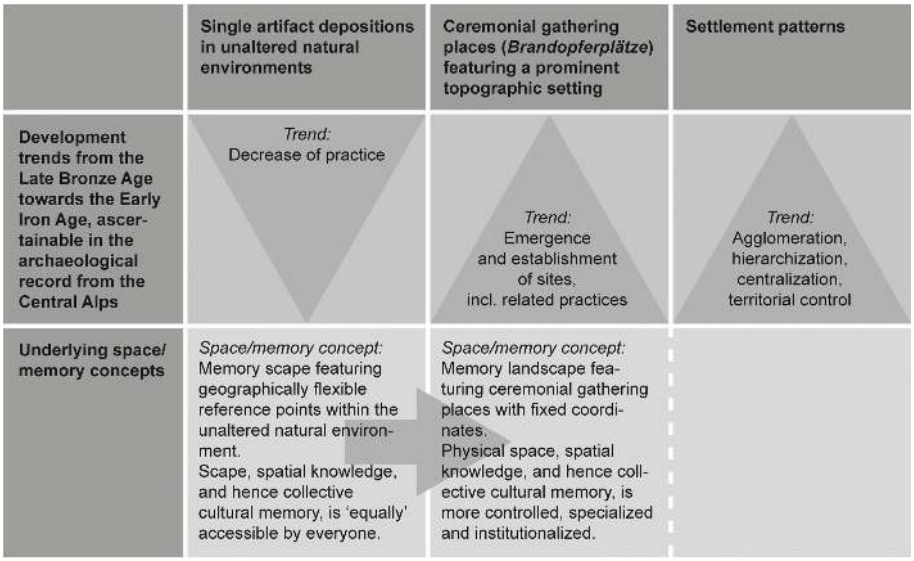

Fig. 6 Development trends in selected archaeological sources indicating a shift in space/memory concepts.

economic network.[76] There seems to be a tendency for the control of collective memory to go hand in hand with the control of the physical topography by elites. The fact that evidence of the object depositional practice with topographic reference declines significantly during the Early Iron Age and after the Hallstatt period at the latest is lacking completely,[77] might point to a changing understanding of space, in which the landscape tends to be more structured, hierarchized and institutionalized by humans. In such a landscape, the immediate connection between mythology and natural landscape becomes less important, and cultural memory is newly concentrated on distinct, marked sites. The elites now control space through the strategic placement of large settlements and check points, resulting in actual territories. A logical consequence of this new feature is the nascent, specific manifestation of ceremonial gathering places or proto-sanctuaries in which material symbolism (which was previously sought in the unaltered, natural terrain) reappears as a construction in the architectonic syntax – as Trevor Watkins puts it: "they could materialize their social institutions, frame their perceptions and form the arena within which social and other relations were played out."[78]

As has been shown, spatialization, as mnemonics, can function not only with the aid of memory places or networks of memory places, but apparently also through flexible, meta-geographic reference points within *scapes* as well. Finally, following on from

76 Steiner 2010, 642.
77 Van Gennep 1909, 19–27, 275–276.
78 Watkins 2004, 105.

this, the following hypothesis can be formulated: the *depositionscape* reflects a quasi-egalitarian form of memory, while the permanently established ceremonial places, such as *Brandopferlätze*, form the framework of a memory form which tends to be specialized, institutionalized and monopolized by elites. The deposition of single artifacts at natural, unaltered locations thus testifies impressively to a genuine form of spatialized memory during the Bronze Age.

Bibliography

Appadurai 1990
Arjun Appadurai. "Disjuncture and Difference in the Global Cultural Economy". *Theory Culture & Society* 7 (1990), 295–310.

Assmann 2007
Jan Assmann. *Das kulturelle Gedächtnis. Schrift, Erinnerung und politische Identität in frühen Hochkulturen*. Munich: C. H. Beck, 2007.

Ballmer 2010
Ariane Ballmer. "Zur Topologie des bronzezeitlichen Deponierens. Von der Handlungstheorie zur Raumanalyse". *Prähistorische Zeitschrift* 85 (2010), 120–131.

Ballmer 2015
Ariane Ballmer. *Topografie bronzezeitlicher Deponierungen. Fallstudie Alpenrheintal*. Universitätsforschungen zur Prähistorischen Archäologie 278. Bonn: Habelt, 2015.

Ballmer 2016
Ariane Ballmer. "YOU ARE HERE. Orientierung und Erinnerung in den Graubündner Alpen (CH) im 2. Jahrtausend v. Chr." In *Raum, Gabe und Erinnerung. Weihgaben und Heiligtümer in prähistorischen und antiken Gesellschaften*. Ed. by S. Hansen, D. Neumann, and T. Vachta. Berlin Studies of the Ancient World 38. Berlin: Topoi, 2016, 55–74.

Bell 1992
Catherine Bell. *Ritual Theory, Ritual Practice*. New York and Oxford: Oxford University Press, 1992.

Bell 1997
Catherine Bell. *Ritual. Perspectives and Dimensions*. Oxford: Oxford University Press, 1997.

Berger 2009
Daniel Berger. "Ein Brandopferplatz in Fläsch GR-Luzisteig. Neue Erkenntnisse zu einer alten Fundstelle". *Jahrbuch Archäologie Schweiz* 92 (2009), 117–164.

Bergmann 1970
Joseph Bergmann. *Die ältere Bronzezeit Nordwestdeutschlands: Neue Methoden zur ethnischen und historischen Interpretation urgeschichtlicher Quellen*. Kasseler Beiträge zur Vor- und Frühgeschichte 2. Marburg: Elwert, 1970.

Bourdieu 1972
Pierre Bourdieu. *Esquisse d'une théorie de la pratique, précédé de trois études d'éthnologie kabyle*. Geneva: Droz, 1972.

Bourgeois 2013
Quentin Bourgeois. *Monuments on the Horizon. The Formation of the Barrow Landscape throughout the 3rd and 2nd Millenium BC*. Leiden: Sidestone, 2013.

Bradley 2000
Richard Bradley. *An Archaeology of Natural Places*. London and New York: Routledge, 2000.

Brück 2011
Joanna Brück. "Fire, Earth, Water. An Elementary Cosmography of the European Bronze Age". In *The Oxford Handbook of the Archaeology of Ritual and Religion*. Ed. by T. Insoll. Oxford: Oxford University Press, 2011, 387–404.

von Brunn 1968
Wilhelm A. von Brunn. *Mitteldeutsche Hortfunde der jüngeren Bronzezeit*. Römisch-Germanische Forschungen 29. Berlin: De Gruyter, 1968.

Clausing 1998
Christof Clausing. "Zur Bedeutung der Bronze als Anzeiger urnenfeldlicher Sozialstrukturen". In *L'Atelier du bronzier en Europe du XXe au VIIIe siècle avant notre ère. Actes du colloque international Bronze'96, Dijon III*. Ed. by C. Mordant, M. Pernot, and V. Rychner. Paris: Comité des travaux historiques et scientifiques, 1998, 309–322.

Colpe 1970
Carsten Colpe. "Theoretische Möglichkeiten zur Identifizierung von Heiligtümern und Interpretation in ur- und parahistorischen Epochen". In *Vorgeschichtliche Heiligtümer und Opferplätze in Mittel- und Nordeuropa. Bericht über ein Symposium in Reinhausen bei Göttingen vom 14. bis 16. Oktober 1968*. Ed. by H. Jankuhn. Abhandlungen der Akademie der Wissenschaften in Göttingen 3. 74. Conference Publication. Göttingen: Vandenhoeck & Ruprecht, 1970, 18–39.

Della Casa 2000
Philippe Della Casa. "Eckdaten der prähistorischen Besiedlung der Alpen, mit Augenmerk auf das Misox und die Zentral- und Südalpen". In *I Leponti tra mito e realtà*. Ed. by R. De Marinis and S. Biaggio Simona. Locarno: Dadò, 2000, 79–92.

Dünne 2011
Jörg Dünne. *Die karthographische Imagination. Erinnern, Erzählen und Fingieren in der frühen Neuzeit*. Munich: Wilhelm Fink, 2011.

Egg 2002
Markus Egg. "Eisenzeitliche Waffenweihungen im mittleren Alpenraum". In *Kult der Vorzeit in den Alpen. Opfergaben, Opferplätze, Opferbrauchtum*. Ed. by L. Zemmer-Plank. Schriftenreihe der Arbeitsgemeinschaft Alpenländer. Bolzano: Athesia, 2002, 961–984.

Fischer 2003
Calista Fischer. "Siedlungsland Sarganserland in der Bronzezeit". In *St. Galler Geschichte*. Ed. by Wissenschaftliche Kommission der Sankt Galler Kantonsgeschichte. Vol. 1. St. Gallen: Amt für Kultur des Kantons St. Gallen, 2003, 101–118.

Fontijn 2002
David R. Fontijn. *Sacrificial Landscapes. Cultural Biographies of Persons, Objects and 'Natural' Places in the Bronze Age of the Southern Netherlands, c. 2300–600 BC*. Analecta Praehistorica Leidensia 33/34. Dissertation. Leiden: University of Leiden, 2002.

Fontijn 2007
David R. Fontijn. "The Significance of 'Invisible' Places". *World Archaeology* 39 (2007), 70–83.

Fontijn 2012
David R. Fontijn. "Landscapes without Boundaries? Some thoughts on Bronze Age Deposition Areas in North-West Europe". In *Hort und Raum. Aktuelle Forschungen zu bronzezeitlichen Deponierungen in Mitteleuropa*. Ed. by S. Hansen, D. Neumann, and T. Vachta. Berlin Studies of the Ancient World 10. Berlin: De Gruyter, 2012, 49–68.

Gleischer, Nothdurfter, and Schubert 2002
Paul Gleischer, Hans Nothdurfter, and Eckehart Schubert. *Das Rungger Egg. Untersuchungen an einem eisenzeitlichen Brandopferplatz bei Seis am Schlern in Südtirol*. Römisch-Germanische Forschungen 61. Mainz: Philipp von Zabern, 2002.

Halbwachs 1941
Maurice Halbwachs. *La topographie légéndaire des évangiles en Terre Sainte*. Paris: Presses Universitaires de France, 1941.

Hansen 1991
Svend Hansen. *Studien zu den Metalldeponierungen während der Urnenfelderzeit im Rhein-Main-Gebiet*. Universitätsforschungen zur prähistorischen Archäologie 5. Bonn: Habelt, 1991.

Hansen 2002
Svend Hansen. "Über bronzezeitliche Depots, Horte und Einzelfunde: Brauchen wir neue Begriffe?" *Archäologische Informationen* 25.1 and 2 (2002), 91–97.

Hansen 2005a
Svend Hansen. "Über bronzezeitliche Horte in Ungarn – Horte als soziale Praxis". In *Interpretationsraum Bronzezeit. Festschrift Bernhard Hänsel*. Ed. by B. Horejs, R. Jung, E. Kaiser, and B. Teržan. Universitätsforschungen zur prähistorischen Archäologie 121. Bonn: Habelt, 2005, 211–230.

Hansen 2005b
Svend Hansen. "Vom Ordnen der Dinge in der Archäologie". In *Die Dinge als Zeichen: Kulturelles Wissen und materielle Kultur. Internat. Fachtagung an der Johann Wolfgang Goethe-Universität Frankfurt a. M. 3.–5. April 2003*. Ed. by T. L. Kienlin. Universitätsforschungen zur prähistorischen Archäologie 127. Bonn: Habelt, 2005, 293–304.

Hauri 1891
Johannes Hauri. "Fund eines Bronzebeils in Davos". *Anzeiger für Schweizerische Geschichte und Altertumskunde* 6 (1891), 478–479.

Heeb 2006
Bernhard Heeb. "Feldkirch, Altenstadt-Grütze. Ein Brandopferplatz der Urnenfelder- und Laugen-Melaun-Kultur". In *Festschrift Konrad Spindler*. Ed. by G. Tomedi and J. Zeisler. ArchaeoTirol. Kleine Schriften 5. Wattens: Archaeo Tirol and Institut für Archäologien, Leopold-Franzens-Universität Innsbruck, 2006, 175–177.

Heeb 2012
Bernhard Heeb. *Das Bodenseerheintal als Siedlungsraum und Verkehrsweg in prähistorischen Epochen*. Frankfurter Archäologische Schriften 20. Bonn: Habelt, 2012.

Horst 1977
Fritz Horst. "Jungbronzezeitliche Schwerter aus dem Elb-Havel-Gebiet". In *Archäologie als Geschichtswissenschaft: Studien und Untersuchungen*. Ed. by J. Hermann. Schriften zur Ur- und Frühgeschichte 30. Festschrift Karl-Heinz Otto. Berlin: Akademie Verlag, 1977, 165–175.

Jecklin 1912
Fritz von Jecklin. "Neuere prähistorische Funde aus dem Bündner Oberland". *Anzeiger für Schweizerische Altertumskunde* 14.3 (1912), 189–193.

Kaul 2003
Flemming Kaul. "Der Mythos von der Reise der Sonne. Darstellungen auf Bronzegegenständen der späten Nordischen Bronzezeit". In *Gold und Kult der Bronzezeit. Katalog zur gleichnamigen Ausstellung, 22. Mai–7. September 2003*. Ed. by Germanisches Nationalmuseum Nürnberg. Nürnberg: Germanisches Nationalmuseum, 2003, 36–51.

Kaul 2004
Flemming Kaul. "Der Sonnenwagen von Trundholm". In *Der geschmiedete Himmel. Die weite Welt im Herzen Europas vor 3600 Jahren. Begleitband zur Sonderausstellung*. Ed. by H. Meller. Stuttgart: Theiss, 2004, 54–57.

Kaul 2005
Flemming Kaul. "Bronze Age Tripartite Cosmologies". *Prähistorische Zeitschrift* 80 (2005), 135–148.

Koenig 1979
Frank E. Koenig. "Der Julierpass in römischer Zeit". *Jahrbuch der Schweizerischen Gesellschaft für Ur- und Frühgeschichte* 61 (1979), 77–99.

Kossack 2002
Georg Kossack. "Der zentrale Alpenraum während der Bronze- und vorrömischen Eisenzeit – Institutionen, Sachbesitz und religiöse Ausdrucksformen". In *Kult der Vorzeit in den Alpen. Opfergaben, Opferplätze, Opferbrauchtum*. Ed. by L. Zemmer-Plank. Schriftenreihe der Arbeitsgemeinschaft Alpenländer. Bolzano: Athesia, 2002, 285–340.

Krämer 1966
Werner Krämer. "Prähistorische Brandopferplätze". In *Helvetia Antiqua. Festschrift Emil Vogt*. Ed. by R. Degen, W. Drack, and R. Wyss. Zurich: Conzett & Huber, 1966, 111–122.

Kristiansen 2010
Kristian Kristiansen. "Rock Art and Religion. The Sun Journey in Indo-European Mythology and Bronze Age Rock Art". In *Representations and Communications. Creating an Archaeological Matrix of Late Prehistoric Rock Art*. Ed. by A. C. Fredel, K. Kristiansen, and F. Criado Boado. Oxford: Oxbow Books, 2010, 93–115.

Kristiansen and Larsson 2005
Kristian Kristiansen and Thomas B. Larsson. *The Rise of Bronze Age Society. Travels, Transmissions and Transformations*. Cambridge and New York: Cambridge University Press, 2005.

Kubach 1985
Wolf Kubach. "Einzel- und Mehrstückdeponierungen und ihre Fundplätze". *Archäologisches Korrespondenzblatt* 15 (1985), 179–185.

Leitner 2002
Walter Leitner. "Feldkirch-Altenstadt, Grütze". In *Kult der Vorzeit in den Alpen. Opfergaben, Opferplätze, Opferbrauchtum*. Ed. by L. Zemmer-Plank. Schriftenreihe der Arbeitsgemeinschaft Alpenländer. Bolzano: Athesia, 2002, 801–805.

Lunz 1974
Reimo Lunz. *Studien zur End-Bronzezeit und früheren Eisenzeit im Südalpenraum*. Florence: Sansoni, 1974.

Mayer 1977
Eugen F. Mayer. *Die Äxte und Beile in Österreich*. Prähistorische Bronzefunde 9. Munich: C. H. Beck, 1977.

Mayer 1980
Eugen F. Mayer. "Bronzezeitliche Passfunde im Alpenraum". *Jahresbericht des Instituts für Vorgeschichte Frankfurt a. M. 1978–1979* (1980), 179–187.

Meller 2010
Harald Meller. "Nebra: Vom Logos zum Mythos – Biographie eines Himmelsbildes". In *Der Griff nach den Sternen. Wie Europas Eliten zu Macht und Reichtum kamen. Internationales Symposium in Halle (Saale) 16.–21. Februar 2005*. Ed. by H. Meller and F. Bertemes. Tagungen des Landesmuseums für Vorgeschichte Halle (Saale) 5. Halle (Saale): Landesamt für Denkmalpflege und Archäologie Sachsen-Anhalt, 2010, 23–73.

Menke 1982
Manfred Menke. *Studien zu den frühbronzezeitlichen Metalldepots Bayerns*. Jahresbericht der Bayerischen Bodendenkmalpflege 19 and 20 (1978 and 79). Munich: Bayerisches Landesamt für Denkmalpflege, 1982.

Neubauer 1994
Wolfgang Neubauer. *Flums-Gräpplang. Eine spätbronzezeitliche Siedlung in der Schweiz*. St. Gallen: Amt für Kulturpflege des Kantons St. Gallen, 1994.

Neubauer and Stöllner 1994
Wolfgang Neubauer and Thomas Stöllner. "Überlegungen zu bronzezeitlichen Höhenfunden anhand eines kürzlich in der Ostschweiz gefundenen Vollgriffmessers". *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz* 41 (1994), 95–144.

Nora 1984
Pierre Nora. "Entre Mémoire et Histoire. La problématique des Lieux". In *Les lieux de mémoire*. Vol. 1: La République. Paris: Gallimard, 1984, 17–42.

Pauli 1992
Ludwig Pauli. "'Fremdstücke' im rätischen Raum. Überlegungen zu ihrem handels-, wirtschafts- und kulturgeschichtlichen Aussagewert". In *Die Räter. I Reti*. Ed. by I. R. Metzger and P. Gleirscher. Schriftenreihe der Arbeitsgemeinschaft Alpenländer. Bolzano: Athesia, 1992, 611–629.

Primas 1977
Margarita Primas. "Die Bronzefunde vom Montlingerberg (Kanton St. Gallen) – Ein Beitrag zur Frage des prähistorischen Verkehrs". *Marburger Studien zur Vor- und Frühgeschichte* 1 (1977), 107–122.

Primas 1998
Margarita Primas. "Der bronzezeitliche Landausbau in den Alpen". In *Mensch und Umwelt in der Bronzezeit Europas*. Ed. by B. Hänsel. Kiel: Oetker-Voges, 1998, 355–365.

Primas 2008
Margarita Primas. *Bronzezeit zwischen Elbe und Po. Strukturwandel in Zentraleuropa 2200–800 v. Chr.* Universitätsforschungen zur prähistorischen Archäologie 150. Bonn: Habelt, 2008.

Primas et al. 2004
Margarita Primas, Philippe Della Casa, Emanuela Jochum Zimmermann, and Renata Huber. *Wartau – Ur- und frühgeschichtliche Siedlungen und Brandopferplatz im Alpenrheintal (Kanton St. Gallen, Schweiz). Teil II. Bronzezeit, Kupferzeit, Mesolithikum*. Universitätsforschungen zur prähistorischen Archäologie 108. Bonn: Habelt, 2004.

Rageth 2010
Jürg Rageth. "Der Siedlungsprozess im bündnerischen Alpenraum während der Bronze- und Eisenzeit und einige Aspekte zu Verbindungswegen". In *Höhensiedlungen der Bronzezeit und Eisenzeit. Kontrolle der Verbindungswege über die Alpen*. Ed. by L. Dal Ri, P. Gamper, and H. Steiner. Forschungen zur Denkmalpflege in Südtirol 6. Trento: Temi, 2010, 381–395.

Schauer 1996
Peter Schauer. "Naturheilige Plätze, Opferstätten, Deponierungsfunde und Symbolgut der jüngeren Bronzezeit Süddeutschlands". In *Archäologische Forschungen zum Kultgeschehen in der jüngeren Bronzezeit und frühen Eisenzeit Alteuropas. Ergebnisse eines Kolloquiums in Regensburg 4.–7. Oktober 1993*. Ed. by Lehrstuhl für Vor- und Frühgeschichte in Verbindung mit dem RGZM Mainz. Regensburger Beiträge zur Prähistorischen Archäologie 2. Bonn: Habelt, 1996, 381–416.

Steiner 2010
Hubert Steiner. "Siedlung und Heiligtum von St. Walburg in Ulten (Südtirol). Studien zu den Brandopferplätzen im Alpenraum". In *Alpine Brandopferplätze. Archäologische und naturwissenschaftliche Untersuchungen*. Forschungen zur Denkmalpflege in Südtirol 5. Trento: Temi, 2010, 1–730.

Steinhauser-Zimmermann 1989
Regula Steinhauser-Zimmermann. *Der Montlingerberg im Kanton St. Gallen (Schweiz). Funde und Grabungen von 1898 bis 1960*. Dissertation. Buchs: Buchsdruck, 1989.

Stöllner 2002
Thomas Stöllner. "Verloren, versteckt, geopfert? Einzeldeponate der Eisenzeit in alpinen Extremlagen und ihre bronzezeitlichen Wurzeln". In *Kult der Vorzeit in den Alpen. Opfergaben, Opferplätze, Opferbrauchtum*. Ed. by L. Zemmer-Plank. Schriftenreihe der Arbeitsgemeinschaft Alpenländer. Bolzano: Athesia, 2002, 567–589.

Torbrügge 1993
Walter Torbrügge. "Spuren in eine andere Welt. Archäologie der vorzeitlichen Wasserkulte. Abschiedsvorlesung vom 21.2.1992 aus Anlass der Emeritierung". In *Archäologische Forschungen zum Kultgeschehen in der jüngeren Bronzezeit und frühen Eisenzeit Alteuropas*. Ed. by Lehrstuhl für Vor- und Frühgeschichte in Verbindung mit dem Römisch-Germanischen Zentralmuseum Mainz. Regensburger Beiträge zur Prähistorischen Archäologie 2. Regensburg: Universitätsverlag Regensburg, 1993, 567–581.

Torbrügge 1970–1971
Walter Torbrügge. "Vor- und frühgeschichtliche Flussfunde. Zur Ordnung und Bestimmung einer Denkmälergruppe". *Bericht der Römisch-Germanischen Kommission* 50 and 51 (1970–1971), 1–146.

von Uslar 1991
Rafael von Uslar. *Vorgeschichtliche Fundkarten der Alpen*. Römisch-Germanische Forschungen 48. Mainz: Philipp von Zabern, 1991.

Van Gennep 1909
Arnold Van Gennep. *Les rites de passage. Étude systématique des rites*. Paris: Nourry, 1909.

Vandkilde 1998
Helle Vandkilde. "Metalwork, Depositional Structure and Social Practice in the Danish Late Neolithic and Earliest Bronze Age". In *L'Atelier du bronzier en Europe du XXe au VIIIe siècle avant notre ère. Actes du colloque international Bronze'96, Neuchâtel et Dijon 1996. Vol. 3: Production, circulation et consommation du bronze*. Ed. by C. Mordant, M. Pernot, and V. Rychner. Paris: Comité des travaux historiques et scientifiques, 1998, 243–257.

Vonbank 1955
Elmar Vonbank. "Quellen zur Ur- und Frühgeschichte Voralbergs". *Montfort* 7 (1955), 114–153.

Vonbank 1963
Elmar Vonbank. *Altenstadt. Uralte Stätte menschlicher Kultur*. Festschrift Musikverein Altenstadt. Dornbirn, 1963, 27–43.

Watkins 2004
Trevor Watkins. "Architecture and 'Theatres of Memory' in the Neolithic of Southwest Asia". In *Rethinking Materiality. The Engagement of Mind with the Material World*. Ed. by E. DeMarrais, Ch. Gosden, and C. Renfrew. Cambridge: McDonald Institute for Archaeological Research, 2004, 97–106.

Weiss 1997
Rainer-Maria Weiss. *Prähistorische Brandopferplätze in Bayern*. Internationale Archäologie 35. Espelkamp: Marie Leidorf, 1997.

Winghart 1986
Stefan Winghart. "Vorgeschichtliche Deponate im ostbayerischen Grenzgebirge und im Schwarzwald. Zu den Horten und Einzelfunden in den Mittelgebirgslandschaften". *Bericht der Römisch-Germanischen Kommission* 67 (1986), 90–201.

Wirth 2006
Stefan Wirth. "Sonnenvogelbarke". In *Reallexikon der Germanischen Altertumskunde*. Ed. by H. Beck, D. Geuenich, and H. Steuer. 2nd ed. Vol. 32. Berlin and New York: De Gruyter, 2006, 552–563.

Wyss 1971
René Wyss. "Die Eroberung der Alpen durch den Bronzezeitmenschen". *Zeitschrift für Schweizerische Archäologie und Kunstgeschichte* 28.3 and 4 (1971), 130–145.

Wyss 1978
René Wyss. "Höhenfunde aus dem Fürstentum Liechtenstein". *Helvetia Archaeologica* 34.36 (1978), 137–144.

Wyss 1996
René Wyss. "Funde von Pässen, Höhen, aus Quellen und Gewässern der Zentral- und Westalpen". In *Archäologische Forschungen zum Kultgeschehen in der jüngeren Bronzezeit und frühen Eisenzeit Alteuropas. Ergebnisse eines Kolloquiums in Regensburg 4.–7. Oktober 1993*. Ed. by P. Schauer. Regensburger Beiträge zur Prähistorischen Archäologie 2. Bonn: Habelt, 1996, 417–428.

Zürcher 1982
Andreas Zürcher. *Urgeschichtliche Fundstellen Graubündens*. Schriftenreihe des Rätischen Museums Chur 27. Chur: Rätisches Museum Chur, 1982.

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1 Ariane Ballmer, based on Stepmap. **2** Ariane Ballmer, based on Federal Office of Topography swisstopo. **3** Jecklin 1912, 190 Fig. 2; 191, Fig. 3. **4** Heeb 2006, 176 Fig. 1. **5–6** Ariane Ballmer.

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